

# PATENT ABSTRACTS OF JAPAN

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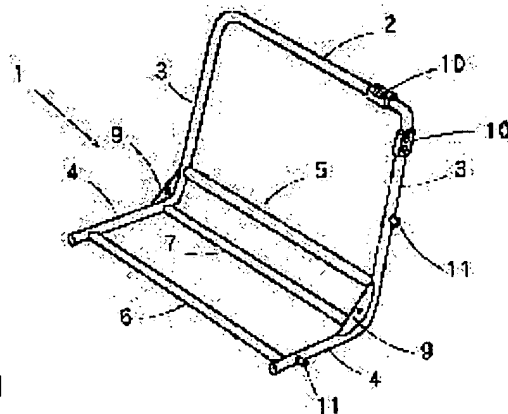
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## (54) FRAME OF SEAT FOR VEHICLE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce production costs and the weight of a seat for a vehicle by providing a simple structure which eliminates the need for using a joint member or the like.

**SOLUTION:** An upper frame 2 along an upper rim of a seat back, rear side frames 3 along side rims of the seat back and lower side frames 4 along side rims of a seat cushion are integrally formed by a pipe material. The rear side frames 3 are connected near the lower end thereof and the lower side frames 4 near the front end thereof and near the rear end thereof separately through cross members 5, 6 and 7 almost parallel with the upper frame 2. A mounting part of a seat belt is built by welding a corner fitting 9 inside corners respectively formed between rear side frames 3 and the lower side frames 4. This enables simple building of the frame.



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## CLAIMS

[Claim(s)]

[Claim.1] A cope box along a seat back's upper limb, and a rear side frame which meets a seat back's side edge, While forming in one a lower side frame which meets a side edge of a seat cushion with a pipe material and combining the between near the front end of a lower side frame, and between near the back end via a cross member respectively almost parallel to said cope box in between near the lower end of a rear side frame, A frame of a sheet for vehicles having welded a corner protector inside a corner which a rear side frame and a lower side frame form, and constituting a fitting part of a seat belt.

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[Translation done.]

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**DETAILED DESCRIPTION**

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the frame of the sheet for vehicles, and relates to the frame of the sheet for vehicles which fixed the seat back's mounting angle to a seat cushion especially.

[0002]

[Description of the Prior Art] So that it may face constituting the frame of the sheet which fixed the seat back's mounting angle to a seat cushion from a pipe material and JP,55-38091,U may see in the former, A back frame object straight along the side edge and upper limb of a seat frame object and a seat back straight along the side edge and front tip of a seat cushion is constituted from a pipe material, respectively, and there are some which made fitting connection of the both ends of both frames in one via the abbreviated L character-like joint member.

[0003] However, in what combined the seat frame object and the back frame object via the joint member in this way, Since the component-parts mark of a seat frame increased, the number of assemblers and weight increased, and moreover, in order that stress might concentrate on the bond part of both frames and a joint member, there was fault that a production cost -- there is the necessity of reinforcing these bond parts -- will go up.

[0004]

[Problem(s) to be Solved by the Invention] It is making to reduce the production cost and weight of the sheet for vehicles into the technical problem by providing the frame of brief composition of that this invention is made in view of the above-mentioned actual condition, and there is no necessity of using a joint member etc.

[0005]

[Means for Solving the Problem] In order to solve an aforementioned problem, this invention forms in one a cope box along a seat back's upper limb, a rear side frame which meets a seat back's side edge, and a lower side frame which meets a side edge of a seat cushion with a pipe material. And in between near the lower end of a rear side frame, while combining the between near the front end of

a lower side frame, and between near the back end via a cross member respectively almost parallel to said cope box, it is characterized by having welded a corner protector inside a corner which a rear side frame and a lower side frame form, and constituting a fitting part of a seat belt.

[0006]

[Embodiment of the Invention]The embodiment of this invention is described in detail based on figures below. The perspective view showing one embodiment of the frame of the sheet for vehicles which requires drawing 1 for this invention, and drawing 2 are the perspective views of the sheet for vehicles using the frame shown in drawing 1. In these figures, the frame 1 which supports the seat back A and the seat cushion B is provided with the cope box 2 along the seat back's A upper limb. While constituting the rear side frame 3 which makes the both ends of the cope box 2 crooked caudad, and meets the seat back's B side edge, the lower side frame 4 which meets the side edge of the seat cushion B is constituted by making the lower end of this rear side frame 3 crooked toward the front.

[0007]And after forming the cope box 2, the rear side frame 3, and the lower side frame 4 in one with a pipe material, in between near the lower end of the rear side frame 3, the between near the front end of the lower side frame 4 and the between near the back end were combined via the cross members 5, 6, and 7 respectively almost parallel to said cope box 2, and the rigidity of the frame 1 is secured. 8 is the seat leg attached to the cross members 6 and 7, comprises a pipe material with said cross members 5, 6, and 7, and is fixing the end to the member of the other party by welding, respectively.

[0008]the cross direction of the rear side frame 3 to the lower side frame 4 attached to the floor etc. which are not illustrated while constituting the fitting part of the seat belt which is not illustrated by on the other hand welding the corner protector 9 inside the corner which the lower end of the rear side frame 3 and the back end of the lower side frame 4 form -- it falls and rigidity is made high.

[0009]While forming the back plates 10 and 10 for attaching the grip C to the lateral surface near the upper bed of the rear side frame 3 near the end of the cope box 2, respectively, By combining the lateral surface near the front end of the lower side frame 4 near the center of the rear side frame 3 via the arch shape armrest D, in addition to the reinforcing effect by the corner protector 9, the seat back A falls, and rigidity is made higher. The armrest D makes high receipts-and-payments nature to the sheet by covering with urethane foam etc. the circumference of rodding which is not illustrated, raising textures, a feel, etc., and making the standup angle by the side of front [ the ] smaller than the seat back's C standup angle. 11 and 11 are the nuts for armrest attachment provided in the lateral surface of the rear side frame 3 and the lower side frame 4.

[0010]Namely, in the frame of the sheet for vehicles by this embodiment, Since the portion supporting the seat back A and the portion supporting the seat cushion B are formed in one with the pipe material, there is no necessity of using a joint member etc. like before, part mark and the number of assemblers can be reduced, and weight and a production cost can be reduced. Since the corner protector 9 is welded [ which the rear side frame 3 and the lower side frame 4 form ], Since it falls, rigidity can be made high and this corner protector 9 moreover constitutes the fitting part of a seat belt to the cross direction of the rear side frame 3 to the lower side frame 4, the increase in part mark can be controlled.

[0011]Although the case where the so-called double seat of a bench type is constituted in the above-mentioned embodiment is explained, For example, the seat back A who divided the upper part into right and left as shown in drawing 3 is attached, Or the interval of the side frames 3 and 4 can be narrowed like the embodiment which attached the seat back who divided the whole into right and left, diversified the form of the sheet although the graphic display was not carried out, or was shown in drawing 4, and the sheet for vehicles of a single seat can be constituted.

[0012]Since each has applied this invention to the sheet for buses in an embodiment, are trying to attach the grip C and the armrest D only to the end side of a sheet, but. When establishing a

passage etc. in the both sides of a sheet, the grip C and the armrest D may be formed in the both sides of a sheet, or the grip C or the armrest D can be omitted, and the composition of a sheet can also be simplified more.

[0013]

[Effect of the Invention]After this invention forms in one the cope box along a seat back's upper limb, the rear side frame which meets a seat back's side edge, and the lower side frame which meets the side edge of a seat cushion with a pipe material, so that clearly from the above explanation, In between near the lower end of a rear side frame, since the between near the front end of a lower side frame and the between near the back end are combined via a cross member respectively almost parallel to said cope box, the component-parts mark and the production man hour of a frame can be reduced, and the weight and the production cost of a sheet can be reduced. the cross direction [ as opposed to / since a corner protector is welded / which a rear side frame and a lower side frame form / and the fitting part of a seat belt is constituted / a lower side frame ] of a rear side frame -- while falling and being able to make rigidity high, the increase in part mark can be controlled.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1]It is a perspective view showing one embodiment of the frame of the sheet for vehicles concerning this invention.

[Drawing 2]It is a perspective view of the sheet for vehicles using the frame shown in drawing 1.

[Drawing 3]It is a perspective view showing the modification of the sheet for vehicles using the frame shown in drawing 1.

[Drawing 4]It is a perspective view showing the modification of the frame of the sheet for vehicles concerning this invention.

[Description of Notations]

- 1 Frame
- 2 Cope box
- 3 Rear side frame
- 4 Lower side frame
- 5, 6, and 7 Cross member
- 8 Seat leg
- 9 Corner protector
- 10 Back plate
- 11 Nut
- A Seat back

B Seat cushion  
C Grip  
D Armrest

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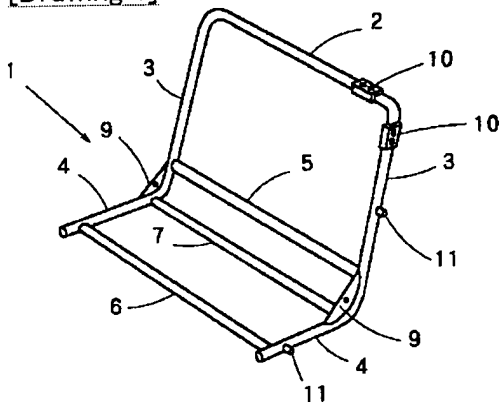
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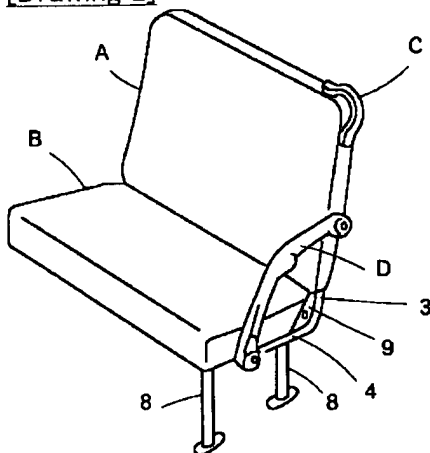
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**DRAWINGS**

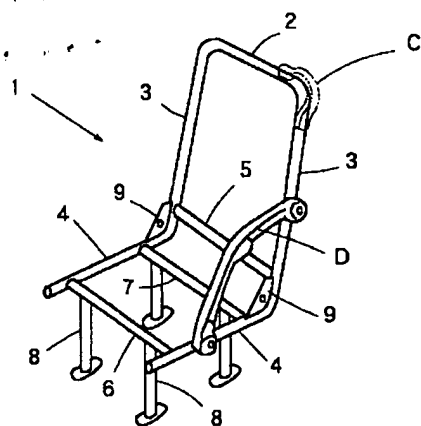
[Drawing 1]



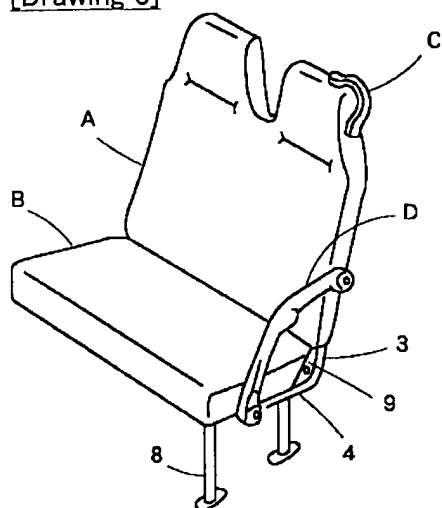
[Drawing 2]



[Drawing 4]



[Drawing 3]



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